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54 Improved closure.

57 This invention provides a closure for closing the mouth of a container. The closure has a body part for engagement with the container and which is provided with a number of openings. The cap part is arranged to open and close the opening and is connected to the body part by a snap hinge. The body part and the cap part have cooperable tamper evident means which interengage when the cap part is first closed and prevents opening of the cap part until the cap part is released by tearing away or breaking the tamper evident means.

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"IMPROVED CLOSURE"

This invention relates to an improved closure.

At present it is known to provide a closure with
a snap hinge arranged to keep a cap part in an open or
5 a closed position. However such closures have not been
provided with tamper evident means due to moulding
difficulties which stem from the moulding of the closure
as a one piece unit.

However, we have now found a way of overcoming this
10 problem and therefore according to the present invention
we provide a one piece plastics moulded closure for
closing the mouth of a container comprising a body part
for engagement with the container and having one or more
openings therein for the dispensing of material held in
15 the container in use, and a cap part arranged to open and
close the or each opening in the body part and connected
to the body part by a snap hinge, the body part and the
cap part having cooperable tamper evident means which
interengage on closing the cap part and thereafter prevent
20 opening of the cap part until the body part and cap part
are released by manipulation thereof by tearing away or
breaking the or a portion of the tamper evident means.

Preferably the tamper evident means are projections on the cap part of the closure which interengage with a tear band on the body of the closure, the cap part being released from interengagement with the body part by
5 manipulation of the tear band to tear it away from the body part.

The invention will now be described by way of example with reference to the accompanying drawings in which:

Figure 1 is a side elevation of the preferred
10 embodiment of closure, open, partly in section;

Figure 2 is a plan view of figure 1;

Figure 3 is a front view of the preferred embodiment of closure, closed; and

Figure 4 is a plan view of figure 3 partly in section.

15 In the drawings a closure 1 comprises a body 2 and a cap 3 hinged to the body by a snap hinge 4 ie one in which the hinge tends to hold the cap in either an open or a closed position.

Snap hinges per se are known, for example from prior
20 U.K. Patent Nos. 1212248, 1230215 and 1251353 to which reference is directed for detailed particulars. Briefly, however, the snap hinge 4 consists of a web 5 connected

to each of the body 2 and the cap 3 by respective weakened portions 6,7. The web 5 is flanked on each side by a further connection 8 between the body 2 and the cap 3 each having a central weakened portion 9. The weakened portions 6,7 and 9 define axes of the hinge which are offset from one another and arranged so as to provide the toggle or snap action, biasing the cap 3 open or closed.

The body 2 of the closure 1 has a top 10, a depending outer skirt 11 and an inner depending plug 12 surrounding a central raised aperture 13. Upstanding around the periphery of the top 10 is a tear band 14 connected to the top 10 by spaced nibs 15 and terminating in a tab 16 by means of which the tear band may be gripped and torn away in use. The tear band 14 provides tamper evidence as will be explained.

The cap part 3 of the closure 1 has a central plug 24 which, when the closure is in the closed position shown in figures 3 and 4, mates with and closes the central aperture 13 in the body 2. Around the outside of the cap 3 are a plurality of projecting pips 17 which are disposed such that, when the closure 1 is closed, the pips 17 are positioned between the nibs 15 on the body 2. Diametrically opposed to the snap hinge 4, the cap 3 is

provided with a protruding thumb tab 18 which aligns with an indent 19 in the body 2 and by means of which a user may open the closure when the tear band 17 is removed.

5 The closure 1 of the invention is moulded open in one piece and, on first closing, becomes both tamper-resistant and tamper evident by the pips 17 on the cap 3 engaging under the tear band 14 between the nibs 15 (see figure 1). In this position the cap 3 cannot be
10 opened until the tear band 14 is removed by manipulation of the tab 16 providing an immediate indication that the closure has been opened.

 The closure 1 is shown with only one opening through which material in a container to which the closure is
15 applied may be dispersed, but the closure 1 may have more than one opening if desired. The closure 1 may be configured so as to be applied to the mouth of any desired container.

 Whilst in the embodiment shown the pips 17 are on the
20 cap part 3 and the tear band 14 is attached to body part 2, it will be understood that these functions could be reversed so that the pips 17 could be arranged around the top 10 periphery of body part 2 and the tear band 14 could be arranged around the rim of cap 3.

CLAIMS:

1. A one piece plastics moulded closure, for closing the mouth of a container, comprising a body part for engagement with the container and having at least one opening therein for dispensing material held in the container and a cap part arranged to open and close the or each opening in the body part and connected to the body part by a snap hinge, the body part and the cap part having cooperable tamper evident means which inter-engage on closing the cap part and thereafter prevent opening of the cap part until the cap part is released by tearing away or breaking the or a portion of the tamper evident means.
2. A closure according to claim 1 wherein the body part has a top, a depending outer skirt and an inner depending plug surrounding a central raised aperture.
3. A closure according to claim 1 or 2 wherein the tamper evident means comprises an upstanding tear band connected to the body part by spaced nibs.
4. A closure according to claim 3 wherein the cap part has a plurality of projecting pips so disposed that, when the closure is in its closed position the pips are positioned between the nibs on the body.
5. A closure according to claim 4 wherein the pips project from the outer periphery of the cap part which fits within the upstanding tear band when the closure is closed.

6. A Closure according to claim 4 varied in that the pips are on the body part and the tear band is attached to the cap part.

5 7. A closure for a container wherein the closure comprises a body part with an opening therein and a cap part connected to the body part by a snap hinge and adapted to open and close the opening in the body part characterised by the provision of cooperable tamper evident means on the two parts of the closure adapted to prevent the cap
10 part being moved into position when once it has been closed until the cap part is freed by mutilation of at least a part of the tamper evident means.

8. A Closure according to claim 7 characterised in that the tamper evident means includes an upstanding tear band
15 disposed around the top of the body part and shaped to surround the periphery of the cap part when the cap part is first closed, the tear band being connected to the body part by frangible connections.

9. A Closure according to claim 8 characterised in that
20 one part of the closure has spaced apart projecting pips to cooperate with frangible tongues connecting the tear band to the other part of the closure.

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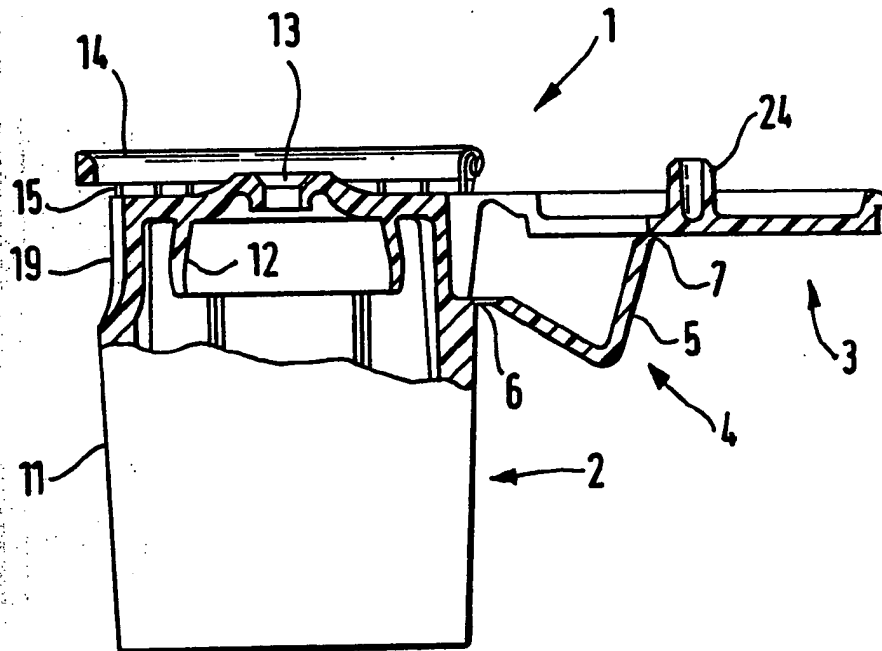


FIG.1.

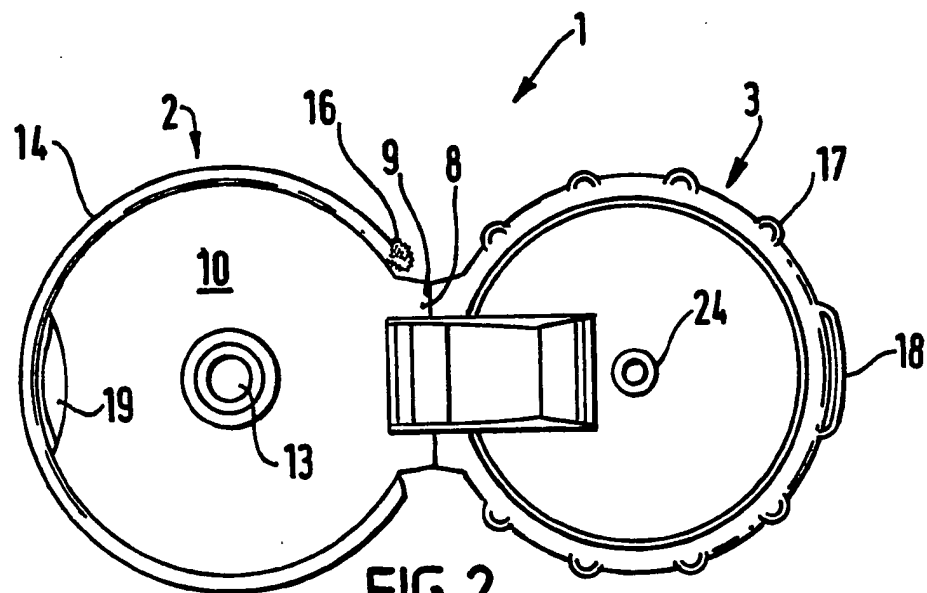


FIG.2.

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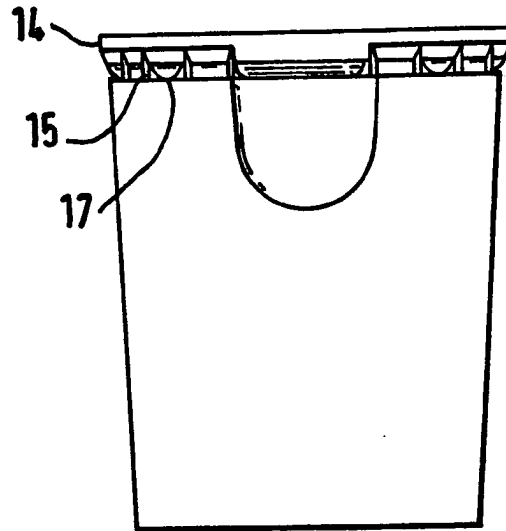


FIG. 3.

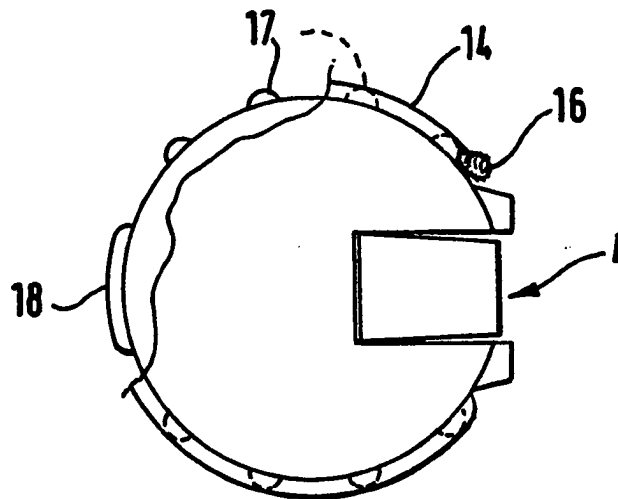


FIG. 4.